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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/653,666 | 09/02/2003 | Koichi Takahashi | JP920020097US1 | 4625 |
| 25259 | 7590 | 04/04/2007 | EXAMINER | |
| IBM CORPORATION | | | JAE, CHARLES J | |
| 3039 CROWN WALLIS RD. | | | | |
| DEPT. T81 / B503, PO BOX 12195 | | | ART UNIT | PAPER NUMBER |
| RESEARCH TRIANGLE PARK, NC 27709 | | | 2109 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | NOTIFICATION DATE | DELIVERY MODE | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/04/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

RSWIPLAW@us.ibm.com

| | | |
|------------------------------|-----------------|-------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/653,666 | TAKAHASHI, KOICHI |
| | Examiner | Art Unit |
| | Charles J. Jae | 2109 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 September 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 02 September 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO/948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/1/2005, 10/24/2006.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

This Office Action is in response to the Application filed on 9/3/2003.

Claim Objections

1. Claims 7-8, 12-14 and 18 are objected to because of the following informalities:

In claim 7, on line 7, the term "the network" lacks proper antecedent basis, and should be changed to --a network-- in order to improve the clarity of the claim.

In claim 8, on line 6, the term "the received request" lacks proper antecedent basis, and should be changed to --a received request-- in order to improve the clarity of the claim.

In claim 12, on line 2, the term "components" has been previously defined, and should be changed to --the components-- in order to make proper reference to its antecedent.

In claim 12, on line 3, the use of the word "them" is inappropriate, and should be changed to --said components-- in order to improve the clarity of the claim.

In claim 13, on line 3, the use of the word "its" is inappropriate, and the phrase "by its own server name" should be changed to --by a server name of said computer equipment-- in order to improve the clarity of the claim.

In claim 14, on line 13, the phrase "the second computer" lacks proper antecedent basis, and should be changed to --the second computer equipment-- in order to improve the clarity of the claim.

In claim 18, on lines 5, 10 and 13, care should be taken to separate the various recitations of "processing means". It is suggest that the recitation on line 5 be changed to --first processing means--, the recitation on line 10 be changed to --second

processing means--, and the recitation on line 13 be changed to --third processing means-- in order to improve the clarity of the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 15-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 15-17 are directed to a program product for controlling computer equipment.

This program product is software, *per se*, which is functional descriptive material.

Functional descriptive material itself is an abstract idea, which fails to fall within any of the four categories of patent-eligible subject matter (method, machine, manufacture or composition of matter). As such, a claim for software, *per se*, is non-statutory.

4. Claim 18 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 18 is directed to a program product for controlling computer equipment. This program product is software, *per se*, which is functional descriptive material. Functional descriptive material itself is an abstract idea, which fails to fall within any of the four categories of patent-eligible subject matter (method, machine, manufacture or composition of matter). As such, a claim for software, *per se*, is non-statutory.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4, 8 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Sit (US 6,349,336).

Claim 1 is drawn to a network system (300) including multiple web servers (308E, 308I) provided on a network and a reverse proxy (312) relaying external access to the multiple web servers, wherein:

a selected one of the multiple web servers responds to a request from a certain terminal (310I) connected to the network to return to said terminal a response including information for maintaining a state of said terminal (the PCs in Sit's system likewise communicate with one or more web servers [column 7, lines 29-31], and the system maintains state information for each terminal [column 7, line 54]); and

the reverse proxy converts said information for maintaining said state of said terminal, into a format recognizable by said terminal as a configuration of the network, and returns said response with said converted information (the reverse proxy in Sit's system functions to "wrap" requests from browsers by changing them into a form that is acceptable to the destination system [column 7, lines 50-53], and also to "unwrap"

responses from the web server to deliver the responses to the browser [column 8, lines 1-2] in a form that the browser will accept.).

Claim 4 is drawn to a reverse proxy relaying data from a web server to a user terminal, comprising:

a header rewriting part for receiving the data returned from the web server to the user terminal, and rewriting a domain included in the data into a format recognizable by the user terminal; and

a data sending part for sending the user terminal said data rewritten by said header rewriting part. As discussed in claim 1 above, the reverse proxy (312) in Sit's system serves to convert messages sent to the web server (308E) and PC into formats that will be accepted by each. The reverse proxy rewrites the data that is sent from the server to the PC, including the header, which contains information such as the domain of the server. It is inherent that Sit's reverse proxy must have a data sending part, because without one, no data could be sent from the reverse proxy to the PC.

Claim 8 is drawn to a reverse proxy relaying a request from a user terminal to a web server, comprising:

a web server name acquiring part for identifying the web server, to which the request is to be sent, from among a plurality of web servers on a network based on information obtained by converting a description of the received request (Sit's reverse

proxy receives a request from a PC and rearranges the header into a response form in which the web server is set as the destination [column 7, lines 50-54]);

a URL rewriting part for rewriting an access destination of the request to a URL of the web server based on an identification of the web server identified by said web server name acquiring part (as described above, the destination of the request is rewritten with the address of the web server); and

a request transfer part for transferring the request to said URL of the web server (it is inherent that Sit's reverse proxy server must have a request transfer part because without one, no data could be sent from the reverse proxy server to the web server).

Claim 18 is drawn to a program product for controlling computer equipment relaying data exchanged between first computer equipment and second computer equipment to perform predetermined processing, comprising:

processing means for receiving a request sent from the second computer equipment identifying the first computer equipment, to which said request is to be sent, based on information obtained by converting a description of said received request (Sit's reverse proxy receives a request from a PC and rearranges the header into a response form in which the web server is set as the destination [column 7, lines 50-54]);

processing means for rewriting an access destination of said request to a URL of the first computer equipment identified (as described above, the destination of the request is rewritten with the address of the web server); and

processing means for sending said request to said URL of the first computer equipment (it is inherent that Sit's reverse proxy server must have means for sending the request to the web server because without such means, no data could be sent from the reverse proxy server to the web server).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 9-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Isomichi (US 6,938,171).

Claim 9 is drawn to computer equipment relaying transmission of an HTTP request and return of an HTTP response between a terminal and a server; comprising:

HTTP request transfer means for relaying the HTTP response with a cookie sent from a browser of the terminal to transfer the HTTP request with said cookie to the server as a destination of the HTTP request (Isomichi's system relays requests and responses between a terminal and a server, including set-cookie information); and

HTTP response transfer means for receiving the HTTP response returned from the server in response to the HTTP request, deleting a domain described in a Set-Cookie header, rearranging components of said domain into an inverse order, embedding said

rearranged components into a path described in said Set-Cookie header, and transferring the HTTP response with said Set-Cookie header to the terminal (Isomichi's system removes the domain field, rearranges it, and places it in the path field of the set-cookie header before sending the response back to the terminal, as can be seen in Figure 10).

Claim 10 further adds, "wherein said HTTP request transfer means specifies a port number of a communication port on the server together with said domain of the server, and transfers the HTTP request to the server." The specification of a port on a server is inherent in TCP/IP communications when transferring data to or from a server.

Claim 11 further adds, "wherein said HTTP response transfer means adds a predetermined fixed-character string to said Set-Cookie header according to the HTTP response, and transfers the HTTP response with said Set-Cookie header to the terminal." In Isomichi's system, the gateway adds the Designation ID to the set-cookie header and transfers the response to the terminal, as seen in Figure 10.

Claim 12 further adds, "wherein said HTTP response transfer means compiles components necessary for identifying said domain when rearranging them in inverse order, and transfers the HTTP response to the terminal." Isomichi's system compiles different data when reconstructing the set-cookie header, including a Designation ID and the Gateway Server Name, arranges said data in an order that will be understood by the terminal, and send the response to the terminal, as in Figure 10.

Claim 13 further adds, "wherein said HTTP response transfer means replaces a domain parameter of the server in said Set-Cookie header by its own server name, and

transfers the HTTP response to the terminal.” Isomichi’s system replaces the domain with a Designation ID, which is used by the Gateway Server to refer to a position in a lookup table that is stored on said server (as seen in figures 4 and 10) before sending the response to the terminal.

Claim 14 is drawn to a data processing method for relaying data exchanged between first computer equipment and second computer equipment, comprising the steps of:

receiving a response sent from the first computer equipment to the second computer equipment (Figure 9, S61);
determining whether said response includes a Set-Cookie header (Figure 9, S62);
rewriting said Set-Cookie header when said response includes said Set-Cookie header so that a cookie set on the second computer equipment based on said Set-Cookie header will have a format recognizable by the second computer equipment (Figure 9, S65); and
sending the second computer said response with said rewritten Set-Cookie header (Isomichi’s system sends the response on to the user after the reverse conversion process [column 10, lines 42-46]).

Claim 15 is drawn to a program product for controlling computer equipment relaying data exchanged between first computer equipment and second computer equipment to perform predetermined data processing, comprising:

first processing means for receiving a response sent from the first computer equipment to the second computer equipment (Figure 9, S61);

second processing means for rewriting a Set-Cookie header when said response includes said Set-Cookie header so that a cookie set on the second computer equipment based on said Set-Cookie header will have a format recognizable by the second computer equipment (Figure 9, S65); and

third processing means for sending the second computer equipment said response with said rewritten Set-Cookie header (Isomichi's system sends the response on to the user after the reverse conversion process [column 10, lines 42-46]).

Claim 16 further adds, "wherein during processing in said second processing means for rewriting said Set-Cookie header, a sequence of a domain included in said Set-Cookie header of said response is altered into an inverse order, and a delimiter of said domain is replaced by a predetermined character to generate a path including said domain rearranged into said inverse order." As can be seen in Figure 10 of Isomichi's disclosure, which describes the reverse conversion process, the domain field in the set-cookie header is changed, placed into the path field, and then removed completely.

The delimiter ":" is also replaced by "/".

Claim 17 further adds, "further comprising means for controlling the first and second computer equipment to rewrite said domain and said path of a link and location included in said response in conformity with said path included in said Set-Cookie header." As can be seen in Figure 10 of Isomichi's disclosure, as part of the reverse conversion process, the domain and path of the link in the body of the HTML document are

changed in accordance with the change to the domain and path in the set-cookie header.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sit (US 6,349,336) in view of Isomichi (US 6,938,171).

Sit meets all of the limitations of claims 2 and 3 as applied to claim 1 above.

Sit does not meet the limitations of deleting, rearranging and placing the domain data into the path field of the set-cookie header.

The general concepts of deleting, rearranging and placing the domain information into the path field are well known in the art, however, as shown by Isomichi.

In Figure 10 of his disclosure, Isomichi shows a process of reverse conversion in which the domain value is deleted, rearranged, and placed into the path variable of the set-cookie header of an HTTP response from a server to a terminal, as required by claims 2 and 3.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the reverse proxy server of Sit to include the use of Isomichi's

reverse conversion process as a way in which to avoid a need for modification of applications running on either the local or remote computer systems.

11. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sit (US 6,349,336) in view of Isomichi (US 6,938,171).

Sit meets all of the limitations of claims 5-7 as applied to claim 4 above. Further, the ability to acquire the web server name and the ability to transfer a request to the appropriate web server, as required by claim 7, are inherent in all proxy servers.

Sit does not meet the limitations of rearranging the domain data in the set-cookie header into the path field or rewriting the links contained in the data.

The general concepts of rearranging the domain data in the set-cookie header into the path field and rewriting the links contained in the data are well known in the art, however, as shown by Isomichi.

In Figure 10 of his disclosure, Isomichi shows a process of reverse conversion in which the domain value is deleted, rearranged, and placed into the path variable of the set-cookie header of an HTTP response from a server to a terminal, as required by claim 5. Isomichi also shows the links in the data section of the server response being rewritten, as required by claims 6 and 7.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the reverse proxy server of Sit to include the use of Isomichi's reverse conversion process as a way in which to avoid a need for modification of applications running on either the local or remote computer systems.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles J. Jae whose telephone number is 571-270-1590. The examiner can normally be reached on Monday thru Friday, 7:30AM-5:00PM, Alt Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on 571-270-1808. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CJJ
03/22/2007

FRANTZ JULES
SUPERVISORY PATENT EXAMINER

